

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	854	549/531 or 203/23 or 203/86	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 15:55
L2	1	I1 and alkene and hydroperoxide and "alkene oxide" and solvent and compressed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:11
L3	236	I1 and (propylene or propene) and (hydroperoxide or "hydrogen peroxide")and "propylene oxide"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:11
L4	19	I3 and (compressed or compression)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:12
L5	10	alkene and hydroperoxide and "alkene oxide" and solvent and compressed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:11
L6	14809	(propylene or propene) and (hydroperoxide or "hydrogen peroxide")and "propylene oxide"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:11
L7	2975	I6 and (compressed or compression)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:13

EAST Search History

L8	1084	I7 and (distill or distillation)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:14
L9	11	I8 and "heat exchange"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:51
L10	41	I8 and (decompression or refrigeration)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 17:43
L11	15	"5744619"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 17:43
S1	10	alkene and hydroperoxide and "alkene oxide" and solvent and compressed	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 15:56
S3	1	10/553516	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 14:51

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NEWS 4 JUL 02 CHEMCATS accession numbers revised
NEWS 5 JUL 02 CA/CAplus enhanced with utility model patents from China
NEWS 6 JUL 16 CAplus enhanced with French and German abstracts
NEWS 7 JUL 18 CA/CAplus patent coverage enhanced
NEWS 8 JUL 26 USPATFULL/USPAT2 enhanced with IPC reclassification
NEWS 9 JUL 30 USGENE now available on STN
NEWS 10 AUG 06 CAS REGISTRY enhanced with new experimental property tags
NEWS 11 AUG 06 BEILSTEIN updated with new compounds
NEWS 12 AUG 06 FSTA enhanced with new thesaurus edition
NEWS 13 AUG 13 CA/CAplus enhanced with additional kind codes for granted patents
NEWS 14 AUG 20 CA/CAplus enhanced with CAS indexing in pre-1907 records
NEWS 15 AUG 27 Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS 16 AUG 27 USPATOLD now available on STN
NEWS 17 AUG 28 CAS REGISTRY enhanced with additional experimental spectral property data
NEWS 18 SEP 07 STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS 19 SEP 13 FORIS renamed to SOFIS
NEWS 20 SEP 13 INPADOCDB enhanced with monthly SDI frequency
NEWS 21 SEP 17 CA/CAplus enhanced with printed CA page images from 1967-1998
NEWS 22 SEP 17 CAplus coverage extended to include traditional medicine patents

NEWS EXPRESS 19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.

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FILE LAST UPDATED: 19 Sep 2007 (20070919/ED)

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=> s (alkene or propene or propylene) and epoxidation and ("liquid alkene" or "liquid propene" or "liquid propylene" or "condensed alkene" or "condensed propylene" or "condensed propene") and (hydroperoxide or "hydrogen peroxide")

36601 ALKENE
86730 ALKENES
99840 ALKENE
(ALKENE OR ALKENES)
75473 PROPENE
776 PROPENES
75809 PROPENE
(PROPENE OR PROPENES)
190676 PROPYLENE
305 PROPYLENES
190775 PROPYLENE
(PROPYLENE OR PROPYLENES)
14745 EPOXIDATION
247 EPOXIDATIONS
14780 EPOXIDATION
(EPOXIDATION OR EPOXIDATIONS)
26320 EPOXIDN
573 EPOXIDNS
26409 EPOXIDN
(EPOXIDN OR EPOXIDNS)
28147 EPOXIDATION
(EPOXIDATION OR EPOXIDN)
789750 "LIQUID"
137059 "LIQUIDS"
892387 "LIQUID"
("LIQUID" OR "LIQUIDS")
1093039 "LIQ"
103662 "LIQS"
1132706 "LIQ"
("LIQ" OR "LIQS")
1569236 "LIQUID"
("LIQUID" OR "LIQ")

36601 "ALKENE"
86730 "ALKENES"
99840 "ALKENE"
 ("ALKENE" OR "ALKENES")
66 "LIQUID ALKENE"
 ("LIQUID" (W) "ALKENE")
789750 "LIQUID"
137059 "LIQUIDS"
892387 "LIQUID"
 ("LIQUID" OR "LIQUIDS")
1093039 "LIQ"
103662 "LIQS"
1132706 "LIQ"
 ("LIQ" OR "LIQS")
1569236 "LIQUID"
 ("LIQUID" OR "LIQ")
75473 "PROPENE"
 776 "PROPENES"
75809 "PROPENE"
 ("PROPENE" OR "PROPENES")
85 "LIQUID PROPENE"
 ("LIQUID" (W) "PROPENE")
789750 "LIQUID"
137059 "LIQUIDS"
892387 "LIQUID"
 ("LIQUID" OR "LIQUIDS")
1093039 "LIQ"
103662 "LIQS"
1132706 "LIQ"
 ("LIQ" OR "LIQS")
1569236 "LIQUID"
 ("LIQUID" OR "LIQ")
190676 "PROPYLENE"
 305 "PROPYLENES"
190775 "PROPYLENE"
 ("PROPYLENE" OR "PROPYLENES")
751 "LIQUID PROPYLENE"
 ("LIQUID" (W) "PROPYLENE")
125182 "CONDENSED"
36601 "ALKENE"
86730 "ALKENES"
99840 "ALKENE"
 ("ALKENE" OR "ALKENES")
1 "CONDENSED ALKENE"
 ("CONDENSED" (W) "ALKENE")
125182 "CONDENSED"
190676 "PROPYLENE"
 305 "PROPYLENES"
190775 "PROPYLENE"
 ("PROPYLENE" OR "PROPYLENES")
5 "CONDENSED PROPYLENE"
 ("CONDENSED" (W) "PROPYLENE")
125182 "CONDENSED"
75473 "PROPENE"
 776 "PROPENES"
75809 "PROPENE"
 ("PROPENE" OR "PROPENES")
1 "CONDENSED PROPENE"
 ("CONDENSED" (W) "PROPENE")
33681 HYDROPEROXIDE
15336 HYDROPEROXIDES
39996 HYDROPEROXIDE
 (HYDROPEROXIDE OR HYDROPEROXIDES)
1015605 "HYDROGEN"
6041 "HYDROGENS"

1018965 "HYDROGEN"
 ("HYDROGEN" OR "HYDROGENS")
220699 "PEROXIDE"
48207 "PEROXIDES"
239693 "PEROXIDE".
 ("PEROXIDE" OR "PEROXIDES")
121842 "HYDROGEN PEROXIDE"
 ("HYDROGEN" (W) "PEROXIDE")
L1 8 (ALKENE OR PROPENE OR PROPYLENE) AND EPOXIDATION AND ("LIQUID
 ALKENE" OR "LIQUID PROPENE" OR "LIQUID PROPYLENE" OR "CONDENSED
 ALKENE" OR "CONDENSED PROPYLENE" OR "CONDENSED PROPENE") AND
 (HYDROPEROXIDE OR "HYDROGEN PEROXIDE")

=> d l1 abs ibib

LI ANSWER 1 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
AB The method comprises epoxidizing liquid propylene with
liquid organic hydroperoxide in the presence of a catalyst, wherein
temperature of propylene gas introduced into the inlet of a compressor
to compress is higher than that saturation temperature. The method
prevents the drain
formation with supplying the gas at the temperature which is higher than
dew-point temperature of the gas which is supplied to the compressor.
ACCESSION NUMBER: 2005:297624 CAPLUS
DOCUMENT NUMBER: 142:355703
TITLE: Method for production of propylene oxide
INVENTOR(S): Shinohara, Koji; Omae, Shunichi
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005089404	A	20050407	JP 2003-327709	20030919
			JP 2003-327709	20030919

=> d l1 2-8 abs ibib

L1 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
 AB A method is described for producing an epoxide (e.g., propylene oxide) comprising: (i) preparation of a stream (S1) containing a compressed liquid alkene (e.g., propylene); (ii) expansion of at least part of the stream (S1) by heat absorption and at least partial evaporation of the liquid alkene; (iii) reaction of the alkene obtained according to step (ii) with a hydroperoxide (e.g., hydrogen peroxide) in the presence of at least one solvent (e.g., methanol) and at least one catalyst (e.g., titanium silicalite) to obtain a mixture containing the epoxide and the solvent(s).
 ACCESSION NUMBER: 2004:902364 CAPLUS
 DOCUMENT NUMBER: 141:380278
 TITLE: Method for producing an epoxide
 INVENTOR(S): Goebbel, Hans-Georg; Bassler, Peter; Teles, Joaquim Henrique; Rudolf, Peter
 PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany
 SOURCE: PCT Int. Appl., 27 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004092149	A1	20041028	WO 2004-EP4077	20040416
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, US, ZM, ZW				
BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG				
DE 10317520	A1	20041104	DE 2003-10317520	20030416
CA 2522466	A1	20041028	CA 2004-2522466	20040416
EP 1620415	A1	20060201	EP 2004-727858	20040416
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
BR 200409425	A	20060425	BR 2004-9425	20040416
CN 1791587	A	20060621	CN 2004-80013456	20040416
US 2006276662	A1	20061207	US 2005-553516	20051014
IN 2005CN02639	A	20070831	IN 2005-CN2639	20051014
PRIORITY APPLN. INFO.:			DE 2003-10317520	A 20030416
		WO 2004-EP4077	W 20040416	

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
 AB The invention relates to a method of regenerating a solid catalyst used for an epoxidation of propylene and an organic peroxide such as cumene hydroperoxide in a reactor filled with the solid catalyst, wherein a liquid such as propylene passes through the reactor at a temperature higher than the maximum temperature of the epoxidin, by 25° to regenerate the solid catalyst.
 ACCESSION NUMBER: 2002:704699 CAPLUS
 DOCUMENT NUMBER: 137:222566
 TITLE: Method of regenerating solid catalyst
 INVENTOR(S): Tsuji, Junpei; Osaki, Shunichi
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokyo Koho, 3 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002263505	A	20020917	JP 2001-71781	20010314
TW 224523	B	20041201	TW 2002-91104030	20020305
CA 2440602	A1	20020919	CA 2002-2440602	20020307
WO 2002072255	A1	20020919	WO 2002-JP2102	20020307
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG				
AU 2002226240	A1	20020924	AU 2002-236240	20020307
EP 1371414	A1	20031217	EP 2002-702781	20020307
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2002008058	A	20040302	BR 2002-8058	20020307
CN 1501839	A	20040602	CN 2002-806414	20020307
US 2004082800	A1	20040429	US 2003-471421	20030911
US 6982235	B2	20060103		
IN 2003CN01449	A	20051125	IN 2003-CN1449	20030915
PRIORITY APPLN. INFO.:		JP 2001-71781	A 20010314	
		WO 2002-JP2102	W 20020307	

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
 AB In a system for manufacturing propylene oxide by epoxidin of liquid propylene (I) with liquid organic hydroperoxide in the presence of a catalyst, 22 pumps are equipped in parallel in a passage, through which I is supplied. In this system, supply of I is ensured, thus preventing deactivation of the catalyst even in an emergency case where one of the I-supplying pumps is terminated.
 ACCESSION NUMBER: 2003:274775 CAPLUS
 DOCUMENT NUMBER: 138:272089
 TITLE: System for manufacturing propylene oxide and its manufacture
 INVENTOR(S): Katao, Masasaki; Omae, Shunichi; Shinohara, Keiji
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003104979	A	20030409	JP 2001-299008	20010928
PRIORITY APPLN. INFO.:			JP 2001-299008	20010928

L1 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
 AB Titanovanadosilicalites are very selective and active catalysts in the epoxidin, of olefins by peroxides. Diluted H2O2 suffices to afford high yields of the epoxide. V incorporation at levels of Si:V = 100-2500 effectively changes the characteristics of the titanatosilicalite into

which it is incorporated to give near quant. conversion of propylene at selectivities >90%. For example, reacting liquid propylene with H2O2 (30% aqueous solution) in MeOH for 6 h at 35°/500 psi under N in the presence of K-exchanged Ti-V-silicalite catalyst (average particle size 130 nm; preparation given) gave 95% propylene oxide with propylene conversion >99%.
 ACCESSION NUMBER: 1998:263255 CAPLUS
 DOCUMENT NUMBER: 128:321554
 TITLE: Titanovanadosilicalites as epoxidation catalysts for olefins
 INVENTOR(S): Nemeth, Laszlo T.; Lewis, Gregory J.; Rosin, Richard R.
 PATENT ASSIGNEE(S): UOP LLC, USA
 SOURCE: U.S., 7 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5744619	A	19980428	US 1997-818265	19970317
ZA 9806223	A	19990202	ZA 1998-6223	19980713
CA 2243009	A1	20000113	CA 1998-2243009	19980713
CA 2243009	C	20070619		
EP 978315	A1	20000209	EP 1998-305563	19980713
EP 978315	B1	20030924		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
ES 2206845	T3	20040516	ES 1998-305563	19980713
IN 1998DE01993	A	20060113	IN 1998-DE1993	19980713
CN 1241564	A	20000119	CN 1998-103371	19980714
AU 9876141	A	20000203	AU 1998-76141	19980714
PRIORITY APPLN. INFO.:			US 1997-818265	A 19970317
			US 1997-840531	A 19970422
			EP 1998-305563	A 19980713
			JP 1998-199271	A 19980714

OTHER SOURCE(S): CASREACT 128:321554
 REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

LI ANSWER 6 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
 AB Epoxides are prepared in the liquid phase by reacting an ethylenically unsat'd compound with 1 part organic hydroperoxide in 4-20 parts anhydrous organic solvent at 80-160° in the presence of molybdate catalyst. The molybdate, which has good solubility in the organic medium, a high concentration in Mo, very high catalytic activity, weak acidity, and high purity, is present in a concentration of 10-4 to 2 + 10-3 mole/kg. solvent and hydroperoxide. Thus, 400 g. com. MoO₃.H₂O containing 90% MoO₃ was dissolved in 900 g. concentrated HCl (d. 1.19) preheated to 90°, the mixture cooled to room temperature, the molybdic chloride separated from the reaction mixture by extracting twice with a total of 2 l. Et₂O, the ether solution dried and evaporated to give 905 g. colorless crystals, the crystals redissolved in dry ether, 440 g. propylene oxide in 500 cc. Et₂O added to the solution at 10-15° during 3 hrs., the mixture stirred 1 hr. and the precipitate filtered off and washed with dry ether, water-saturated ether, and then dry ether and dried at 40° under vacuum to give 465 g. propylene glycol molybdate (MoC₄C₃H₆) (I) containing 71.9% MoO₃. I (1 g.) was dissolved in 1 g. propylene glycol at 100°, the product mixed with 500 g. tert-BuOH, 500 g. 99% tert-BuOOH added to give a solution containing 5 + 10-3 g. atoms Mo/kg., 10 cc. of this solution and 20 cc. liquid propylene at -80° were sealed in a pressure-resistant glass tube, heated to 110°, cooled to -80°, and degassed to give a solution containing approx. 10% propylene oxide with a 7% conversion of hydroperoxide.

ACCESSION NUMBER: 1969:471417 CAPLUS
 DOCUMENT NUMBER: 71:71417
 TITLE: Epoxides: molybdate catalysis
 INVENTOR(S): Poite, Michel
 PATENT ASSIGNEE(S): Naphtachimie
 SOURCE: Fr., '5 pp.
 CODEN: FRXXAK
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1550166	---	19681220	FR	19670811

LI ANSWER 7 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
 AB Olefins are contacted in the liquid phase with tert-BuOOH at 50-200° in the presence of a Mo metal catalyst whereby the ratio Mo metal surface to the number of g. hydroperoxide is 1-20 cm²/g. Thus, 100 g. liquid propylene was contacted with 22.4 g. tert-BuOOH, 22.4 g. tert-BuOH, 140 g. xylene, and the Mo metal catalyst. The following results were obtained (ratio cm²/g., reaction time, min. temperature, conversion in mol. %, and yield of epoxide with respect to converted hydroperoxide given): 23.3, 60, 110-11°, 90.8, 64.7; 23.3, 20, 110-11°, 52.7, 72.5; 3.9, 60, 110-11°, 82.5, 75.2; 3.9, 20, 110-11°, 32.1, 90.5; 23.3, 60, 105-6°, 73.5, 74.7; 3.9, 60, 105-6°, 75.7, 79.2. A mixture containing 1.73 g. 1-octene, 0.513 g. tert-BuOOH, and a Mo metal plate with a total surface of 1.8 cm² was heated at 102° and kept 20 min. at 102° (ratio Mo metal to tert-BuOOH was 3.5 cm²/g.) to give a conversion of 37 mole % and a yield of 100 mole %.

ACCESSION NUMBER: 1967:432577 CAPLUS
 DOCUMENT NUMBER: 67:32577
 ORIGINAL REFERENCE NO.: 67:6155a
 TITLE: Epoxides
 PATENT ASSIGNEE(S): Atlantic Refining Co.
 SOURCE: Neth. Appl., 8 pp. Addn. to Neth. Appl. 6517166
 DOCUMENT TYPE: Patent
 LANGUAGE: Dutch
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6605821	---	19670102	NL 1966-5821	19660429
DE 1568001			DE	
FR 89938			FR	
GB 1146202			GB	
PRIORITY APPLN. INFO.:			US	19650701

LI ANSWER 8 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
 AB The title compds. are prepared by contacting C₂-4 olefins with a C₄-8 tert-alkyl hydroperoxide at 50-200° in an organic solvent containing at least 20% by weight hydrocarbon in the presence of metallic Mo or a Mo compound. Thus, expts. were carried out with 25 g. 94% tert-BuOOH and 0.05 g. Mo(CO)₆ as catalyst while tert-BuOH and C₆H₆ were used as solvent. To this mixture was added 100 cc. liquid propylene and the reaction carried out 1 hr. at 110-11°. The following results were obtained (tert-BuOH in g., C₆H₆ in g., C₆H₆ % by weight, conversion in mole %, and yield of 1,2-epoxypropane in mole % given): 0, 125, 100, 92.2, 88.8 (at a reaction temperature of 106°); 25, 100, 80, 82.0, 89.3; 50, 75, 60, 70.8, 84.8; 75, 50, 40, 58.3, 86.0; 100, 25, 20, 47.0, 86.5; 125, 0, 0, 43.0, 77.2. A similar experiment with 25 g. tert-BuOOH, 0.05 g. Mo(CO)₆, and 125 g. tert-BuOH and no hydrocarbon solvent gave, when treated with 100 cc. liquid propylene 1 hr. at 106°, 43.5 mole % conversion and 64.3 mole % yield of 1,2-epoxypropane. Under optimum conditions a yield of 75 mole % and a conversion of 89 mole % were obtained. Similarly, 22.4 g. tert-BuOOH (100%), 22.4 g. tert-BuOH, 0.1 g. Mo(CO)₆, 100 cc. liquid propylene allowed to react 1 hr. at 110-11° gave with 120 g. xylene (isomeric mixture) 91.7 mole % conversion and 70.0 mole % yield. The use of 140 g. xylene gave 91.7 mole % conversion and 80.2 mole % yield. The latter experiment carried out with other catalysts gave the following results (amount of catalyst, catalyst, conversion, and yield in mole % given): 0.05 g., MoCl₅, 92.0, 82.0; 1.5 g., MoO₂ (freshly prepared by reduction of Na₂MoO₄ with NH₂NH₂), 95.0, 74.0; 0.1 g. powdered Mo, 92.1, 71.5.

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 PATENT ASSIGNEE(S): Atlantic Refining Co.
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